Notes.

LORD MOULTON has been elected an honorary member of the Institution of Civil Engineers.

AT the meeting of the Royal Society on May 12 a discussion on "The Quantum Theory of Line-Spectra" will be opened by Sir Ernest Rutherford, followed by Dr. N. Bohr.

THE thirtieth annual meeting of the Royal Society for the Protection of Birds will be held at the Middlesex Guildhall, Westminster, S.W., on Tuesday, March 8, at 3 p.m. The Right Hon. Field-Marshal Lord Methuen, vice-president of the society, will occupy the chair.

PROF. C. S. SHERRINGTON, president of the Royal Society, has been elected a member of the Athenæum under the provisions of the rule of the club which empowers the annual election by the committee of a certain number of persons "of distinguished eminence in science, literature, the arts, or for public service."

THE council of the Royal Statistical Society will in November next award the Frances Wood memorial prize, value 30*l.*, for the best investigation of any problem dealing with the economic or social conditions of the wage-earning classes. Particulars may be obtained from the honorary secretaries of the Royal Statistical Society, 9 Adelphi Terrace, W.C.2.

THE twenty-fifth anniversary of the discovery of the "Zeeman effect" will take place on October 31 next. A committee has been formed by scientific men in Holland to mark the occasion by showing their appreciation of the importance of the discovery and of the distinguished services which Prof. Zeeman has rendered to science. It is intended to raise a fund to be placed at his disposal for researches to be conducted in the physical laboratory of the University of Amsterdam. Any contributions to this fund may be sent to Sir Arthur Schuster, Yeldall, Twyford, Berkshire, who will forward them to the Dutch committee.

THE annual general meeting of the Institute of Metals will be held in the room of the Institution of Mechanical Engineers on Wednesday and Thursday, March 9 and 10. A paper on the recrystallisation of aluminium sheet by Prof. H. C. H. Carpenter and Constance F. Elam, and another on calcium by Mr. P. H. Brace, will be presented at the morning session on March 9. The afternoon session of the same day and the morning session of March 10 will be devoted to four papers on copper and copper alloys by Prof. C. A. Edwards and Mr. A. M. Herbert, Mr. H. Moore and Mr. S. Beckinsale, Mr. H. Moore, Mr. S. Beckinsale and Mr C. E. Mallinson, and Dr. J. L. Haughton. The afternoon session of March 10 will take the form of a visit to the National Physics Laboratory. The annual dinner of the society will be held on the evening of March 9.

SIR FRANCIS YOUNGHUSBAND, president of the Royal Geographical Society, announced to the society on Monday that since the previous meeting of the Mount Everest Committee further progress had been made with the organisation of the expedition. Subject to the approval of the Government of India, Major Morshead and Capt. Wheeler will accompany the expedition as survey officers. Dr. Kellas, who has for many years devoted himself to Himalayan exploration, has accepted an invitation to join the expedition, and also Mr. G. L. Mallory and Capt. George Finch. Sir Francis Younghusband added:—"Our party for the reconnaissance is thus complete, and we are now engaged in equipping it in the best possible manner for the important work it will have to do this summer in examining the mountain from every angle and testing the possible ways by which its summit may be reached."

AT the annual general meeting of the Association of Economic Biologists, held in the Imperial College of Science on Friday last, the following were elected officers and councillors for the year 1921:—*President:* Sir David Prain. *Hon. Treasurer:* Dr. A. D. Imms, *Hon. Secretary (Gen. and Bot.)* Wm. B. Brierley. *Hon. Secretary: (Zool.):* Dr. S. A. Neave. *Hon. Editor (Bot.):* Wm. B. Brierley. *Hon. Editor (Zool.):* D. Ward Cutler. *Council:* Dr. W. Lawrence Balls, Prof. V. H. Blackman, F. T. Brooks, A. B. Bruce, Dr. E. J. Butler, F. J. Chittenden, A. D. Cotton, J. C. F. Fryer, Prof. J. B. Farmer, E. E. Green, Dr. G. A. K. Marshall, and Dr. E. J. Russell. In view of the very great increase in the publishing costs of the *Annals of Applied Biology*, it was decided to establish a "Publication Fund," to which all interested in the progress of biology and in its application to the welfare of man are invited to subscribe. Sir David Prain then delivered his presidential address on "Some Relationships of Economic Biology."

AT the annual general meeting of the Physical Society held on February 11, the following officers were elected:—*President:* Sir W. H. Bragg. *Vice-Presidents who have filled the office of President:* Dr. C. Chree, Prof. H. L. Callendar, Prof. R. B. Clifton, Sir Richard Glazebrook, Sir Oliver J. Lodge, Prof. C. H. Lees, Prof. A. W. Reinold, Sir Arthur Schuster, Sir J. J. Thomson, and Prof. C. V. Boys. *Vice-Presidents:* Prof. W. Eccles, Prof. A. S. Eddington, the Right Hon. Lord Rayleigh, and Prof. Sir Ernest Rutherford. *Secretaries:* Mr. F. E. Smith, National Physical Laboratory, Teddington, and Dr. D. Owen 62 Wellington Road, Bush Hill Park, N. *Foreign Secretary:* Sir Arthur Schuster. *Treasurer:* Mr. W. R. Cooper, 82 Victoria Street, S.W.1. *Librarian:* Prof. A. O. Rankine. *Other Members of Council:* Dr. G. B. Bryan, Mr. C. R. Darling, Prof. C. L. Fortescue, Dr. E. Griffiths, Dr. F. L. Hopwood, Dr. E. H. Rayner, Dr. A. Russell, Mr. T. Smith, Dr. J. H. Vincent, and Prof. W. B. Morton.

REPORTS have appeared in the daily Press respecting a serum treatment for tuberculosis introduced by M. Henri Spahlinger, of Geneva, shortly before the outbreak of war. Preliminary trials of the serum have been made upon a small number of selected cases by physicians in London and Paris, and it is stated that cases treated in 1913 are still alive and well. The nature and mode of preparation of the remedy do not appear to be disclosed, but according to a communication made by Prof. D'Arsonval to the Paris Academy of Sciences, M. Spahlinger divides tuberculosis cases into two classes for purposes of treatment, (1) acute cases treated by means of "complex antitoxic and bacteriolytic serums" and (2) chronic cases treated by "vaccination with a series of antigens and ferments," the former being derived from the bacillary substance of the tubercle bacillus. Patients are finally treated with a series of injections of the different antigens given separately. The preliminary trials have apparently been so successful that a tuberculosis specialist is being sent by the Ministry of Health to Geneva to investigate at first hand the Spahlinger cure.

CONSIDERABLE concern has been expressed at the announcement that the Treasury contemplates the withdrawal of grants hitherto given to the Industrial Fatigue Research Board, and at the recent conference on this subject at Olympia a resolution was carried urging the Government to revoke this decision. It appears that the withdrawal of the grant is regarded as a measure of economy, but anyone conversant with industrial matters is aware of the great waste occasioned by unnecessary fatigue, both in slowing down the speed of production and in leading to accidents and ill-health. Rightly regarded, therefore, researches having for their object the elimination of such fatigue are essentially "economical." The work of the Board has hitherto been conducted on a modest scale, and its expenditure has been small in comparison with the importance of its field of operations. Other countries, we believe, have followed our lead in instituting such inquiries, and their discontinuance would be most regrettable. It is also to be feared that the step proposed in regard to the Industrial Fatigue Research Board will constitute a regrettable precedent by discouraging investigators from taking up work of this nature, and that it may be followed by the restriction or withdrawal of facilities for research in other directions. We sincerely hope that the efforts being made to induce the Treasury to revoke the decision will be successful.

IN accordance with the provisions of the Dyestuffs (Import Regulation) Act, 1920, the President of the Board of Trade has appointed the following Committee to advise the Board of Trade with respect to the granting of licences under the Act:—Mr. V. Clay (joint managing director, Robert Clay, Ltd.), Mr. G. W. Currie, Mr. G. Douglas (managing director, Bradford Dyers' Association, Ltd.), Mr. E. V. Evans (treasurer of the Society of Chemical Industry), Dr. M. O. Forster (director of the Salter Institute of Industrial Chemistry), Mr. C. C. Railton (director, Calico Printers' Association, Ltd.), Mr. H. B. Shackleton (Messrs. Taylor, Shackleton and Co., Shipley), Mr. T. Taylor (Cornbrook Chemical Co., Stockport), Mr. S. A. H. Whetmore (British Dyestuffs Corporation, Ltd.), and Mr. W. J. U. Woolcock (general manager, Association of British Chemical Manufacturers). Pending the appointment of a permanent chairman, which it is hoped to make at an early date, Mr. Percy Ashley, assistant secretary, Industries and Manufactures Department, Board of Trade, will act as chairman of the Committee. The secretary to the Committee is Mr. W. Graham, and all applications for licences should be addressed to the Secretary, Dyestuffs Advisory Licensing Committee, Danlee Buildings, Spring Gardens, Manchester.

THE Lord President of the Council has established an Inter-Departmental Committee on Patents with the following terms of reference:—(1) To consider the methods of dealing with inventions made by workers aided or maintained from public funds, whether such workers be engaged (*a*) as research workers or (*b*) in some other technical capacity, so as to give a fair reward to the inventor and thus encourage further effort, to secure the utilisation in industry of suitable inventions, and to protect the national interest; and (2) to outline a course of procedure in respect of inventions arising out of State-aided or supported work which shall further these aims and be suitable for adoption by all Government Departments concerned. As at present constituted, the Committee consists of the following members:—Dr. Kenneth Lee (chairman), Mr. W. St. D. Jenkins, Mr. F. E. Smith, Sir E. L. Ellington, Mr. H. W. W. McAnally, Mr. P. W. L. Ashley, Col. W. H. D. Clark, Sir H. Frank Heath, Mr. A. J. Stubbs, Dr. H. H. Dale, Mr. W. J. Coombes, Lt.-Col. P. K. Lewes, Mr. P. Tindal Robertson, Sir Richard Gregory, Mr. D. M. Kerly, and Sir Charles A. Parsons. The secretary to the committee is Mr. A. Abbott, to whom all communications should be addressed at 16 and 18 Old Queen Street, Westminster, London, S.W.1.

MR. F. H. CARR, in a paper on the post-graduate training of chemical students for industry read at a meeting of the Old Students' Association of the Royal College of Science on February 8, outlined a scheme involving the establishment of a technological teaching laboratory which would, in practice, be a miniature manufacturing concern, attached to a college, providing the necessary lectures and class-room instruction. The plant would be available for technical-scale experiments interpreting the results of research work from research institutions or elsewhere. Further, it would be utilised for the manufacture of those fine chemicals that are not ordinarily obtainable in the chemical trade, and of which a restricted and irregular supply is required by colleges and research laboratories. This manufacturing laboratory would be conducted under conditions of strict and complete business organisation and discipline. A fundamental object of the instruction suggested would be the introduction of the cost factor in relation to power, heat, labour, material, and yield, whilst a spirit of reality would be maintained by disposing of the products so far as possible through existing trade channels. The nature of the work, as exemplified in the syllabus, would be general, and would not be identified with any particular branch of industry; it would keep in view the necessity for a training in the broad principles underlying chemical technology. If possible, arrangements would be made for the students to attend manufacturing works for courses of practical instruction, and special teaching would be provided by men actually engaged in the various specific chemical industries. An interesting feature of the discussion which followed Mr. Carr's paper was the united praise bestowed upon Prof. J. F. Thorpe's scheme—now approaching completion—of a technical-scale laboratory to be established as an adjunct to the Honours Organic Laboratory at South Kensington.

IN the January issue of *Man* Mr. T. A. Joyce describes a carved wooden coffer from British Columbia which has been recently acquired by the British Museum. It is a fine specimen of native work, the central panel on one side representing a grizzly bear protecting its cub. The eyes, ears, nostrils, and fore-paws of the bear are inlaid with abalone (haliotis) shell, while the mouth of the larger figure is furnished with twelve graduated deer-teeth. Coffers of this kind were used by men of rank for storing valuable property, such as the hereditary insignia worn by individuals who had the right of impersonating certain legendary and supernatural beings at the winter ceremonials. The British Museum is indebted for the coffer to Mr. St. George Littledale, who obtained it and generously presented it to the nation.

SOME time ago the Library Association instituted examinations in librarianship and granted certificates on the result. From the report of a discussion opened by Dr. W. E. Hoyle, and printed in the *Museums Journal* for February, it appears that the Museums Association contemplates similar action. Taking as a *sine qua non* a high standard of general education, the next essential is a good grounding in the particular branch of knowledge appropriate to the candidate's proposed work. Lastly follows a special training in museum administration and methods. Clearly it is in this last that the difficulty lies, both for training and for examining. Perhaps the most practical suggestion made in the discussion was that an apprenticeship should be served in the national museums. To some extent, by force of circumstances, that has been the case in the past, but it was not an accepted or organised method. Whether a man is to stay in the central museum or whether he is to take a post in the provinces, it is most desirable that he should pass through the mill and learn his business in the administrative and technical departments from the bottom upwards.

THE first part of vol. lxv. of the *Quarterly Journal of Microscopical Science* marks a new era in the history of that well-known periodical. Prof. E. S. Goodrich has succeeded Sir Ray Lankester as editor-in-chief, and at the same time the publication has passed from the hands of Messrs. J. and A. Churchill into those of the Oxford University Press. Unfortunately, these changes are accompanied by a rise in price from 12*s.* 6*d.* to 1*l.* 1*s.* per number. We hope that this increase will not be counterbalanced by a corresponding decrease in the number of subscribers.

THE current issue of the *Quarterly Journal of Microscopical Science* (vol. lxv., part 1) contains a rather startling paper by Mr. Arthur Bolles Lee on "The Structure of Certain Chromosomes and the Mechanism of their Division." After describing the animal chromosome as consisting normally of an axial core of basophilous chromatin twisted into a screw-like form with a spiral flange, and an investing sheath with acidophilous staining properties, he proceeds to deny that the longitudinal splitting of chromosomes which has formed the basis of so much theorising really takes place. According to Mr. Lee's view, the double character so suggestive of longitudinal splitting arises from the close approximation of the limbs of an originally **V**-shaped chromosome, and the division of the chromosome really takes place by rupture at the apex of the **V**. It will be interesting to see what other cytologists have to say about this iconoclastic statement.

WE have received a copy of a special issue of *Die Naturwissenschaften* commemorating the twenty-fifth anniversary of the discovery of X-rays by Prof. Röntgen. A portrait of the discoverer forms the frontispiece, but is a rather disappointing reproduction. Original articles are the attraction, and are written by men well known in their respective spheres. Four out of the eight articles are devoted to the part which can be played by X-rays in the determination of atomic structure in crystals and other substances. The technical developments in the manufacture of X-ray tubes are described by Knipping in a brief article, the medical uses of X-rays being dealt with by Levy-Dorn. Radiographic reproductions receive scant justice, owing to the poor quality of the paper used. The issue concludes with a long article by Pfeiffer on the vital part which X-rays have played in many problems in chemistry.

IN the November, 1920, issue of the *Journal de Physique et le Radium,* M. A. Dufour describes his cathodic oscillograph, which gives a photographic reproduction of any phenomenon which can be translated into a constant or variable magnetic or electric field so long as the frequency involved does not exceed 10^9 per second. The cathode rays utilised are produced at a plane cathode at the top of a vertical tube and are fired down through a pierced anode into a bell-shaped metal chamber, at the bottom of which a fluorescent screen or a cylindrical photographic film can be placed. The chamber can be exhausted, and provision is made for magnetic control from outside of the motor which rotates the cylinder. The electric or magnetic field is applied to the rays at the top of the bell chamber, and for low frequencies the cathode rays are moved parallel to the axis of the cylinder, which itself rotates at a uniform rate. For high frequencies the photographic film remains at rest while an auxiliary oscillation of low frequency but large amplitude at right angles to that to be studied is imparted to the rays. In order to prevent overlapping of the curves, a further slow motion of the ray parallel to the original motion is introduced by the slow change of a second auxiliary magnetic field.

WE learn from the *British Journal of Photography* for February 11 that at the meeting of the Royal Photographic Society held on February 9, Mr. Thorne Baker and Dr. L. A. Levy introduced "a new X-ray plate reducing exposure to one-twenty-fifth," and indicated its special application to radio-metallurgy. The plate is distinguished as the Imperial "Impex." Its extraordinary sensitiveness is obtained by incorporating the intensifying screen with the plate. The screen consists of a layer of calcium tungstate in soluble gelatine, and is coated on top of the emulsion which is hardened, so that after the exposure the screen can be dissolved off by water at 100° F. and development then carried out as usual. The screen being in optical contact with the emulsion, an "infinitely smaller" quantity of calcium tungstate is necessary to give the required intensification. The new plate takes a little longer to develop than usual (say 25 per cent.). The size of the particles of the calcium tungstate is some two or three times that of the particles of silver salt in the emulsion.

THE hope has often been expressed that means might be found for desensitising a photographic plate after its exposure, so that its development might be done without the extreme precautions that are necessary as to the light employed. This applies with the greatest force to highly sensitive panchromatic plates, which stand so very feeble a light that most persons prefer none at all, trusting to the time of treatment that is supposed to be suitable to the temperature of the developer. It has been found that certain substances possess the desired effect to a greater or less degree, but for one reason or another they have not proved acceptable. But "desensitol," which has just been put upon the market by Messrs. Ilford, Ltd., is simple to use and very effective. It is a solution of a red dye, and it is only necessary to dilute it with 50 parts of water and immerse the exposed plate in it, then after one minute the light may be increased to from 200 to 800 times the brightness that would previously have been safe, and the plate transferred to the developer and watched in comfort. From a scientific point of view there are many interesting points about such desensitising action, and we hope that we shall soon see the results of investigations into the changes, if any, produced by the desensitiser in the form of the characteristic curve and the proportional colour sensitiveness of plates of various kinds.

THERE can be very few officers who served in France who are not familiar with the co-ordinate reference card which was issued by the War Office to facilitate map descriptions and map measurements after the introduction of the application of a cartesian grid to all Service maps up to scales of 1 : 40,000. The same idea is embodied in the "Romer graph plotter" (A. G. Thornton, Ltd., Paragon Works, 49 King Street West, Manchester). A rectangular piece of cardboard (or celluloid), 8″×6″, is graduated along its edges with the zero graduations at the top right-hand and the bottom left-hand corners. By this means, given two rectangular axes, a point of given co-ordinates can be plotted and the co-ordinates of a given point read off without the use of squared paper and as accurately as would be possible if squared paper were employed. The advantages are obvious. Accurate graphs can be drawn in ordinary note-books or on ordinary paper; the attention of the student is concentrated on the graph rather than on the axes; and, more important still, the expense involved in the purchase of squared paper, by no means a small item, is avoided. Teachers of mathematics and science will probably not regret giving this instrument a trial.

A KINEMATOGRAPH projector of a new type was demonstrated by Mr. R. J. Trump at the Imperial College, South Kensington, on February 10. The invention of Mrs. Kingsley-Higginson, it employs, in place of the shutter and intermittent film-feeding gear of the ordinary machine, a continuously rotating ring of mirrors to stabilise the image and effect the change of picture while the film is run uniformly through the machine. The beam of light is thus always passing unobstructed to the screen, and the alternations of light and darkness produced by the shutter, which constitute the flicker of the ordinary projector, are avoided. The new apparatus can be run quite slowly if required, and in any case there is no necessity to speed it up in the way that is at present usual. The change of picture takes place zone by zone across the screen, which always shows a full image, derived from parts of two successive pictures on the film. The facets on the ring of mirrors are so arranged and set at such an angle that the two lights from the two partial film-pictures which are present at any instant in the gate are separated and transposed into their correct positions on the screen, and join up to form a complete image. There is no dark period and no overlapping or dissolving of the successive pictures into each other, as the first picture disappears at precisely the same rate that the second takes its place. A good and sharply defined image is obtained. The advantages of a uniform feed for the film are considerable, in that the wear and tear upon it are much reduced and the risk of breakage is negligible. The application of the same principles to kinemaphotography is under consideration, and there is every expectation that useful results will be obtained.

MESSRS. SOTHEBY, WILKINSON AND HODGE will sell by auction at their galleries at 34 and 35 New Bond Street, W.1, on Thursday and Friday, March 3 and 4, a large number (509 lots) of valuable works dealing with natural history and travel, the property of the late Dr. F. du Cane Godman. Many rare books are included, also several long runs of scientific journals and transactions of learned societies. The catalogue should be of great interest to many readers of NATURE.

SIR WILLIAM TILDEN has written for publication by Messrs. George Routledge and Sons, Ltd., a book on "Famous Chemists: The Men and their Work," in which the lives of twenty-one leading chemists, from Robert Boyle to Sir William Ramsay, will be dealt with in a non-technical manner. The sketches, while chiefly biographical in character, will give attention to the social and political conditions of the times in which the subjects dealt with lived, in order to show the relation of discovery in physical science to the progress of civilisation.

A SOMEWHAT novel way of keeping a book up to date, other than by issuing new editions, has been devised by the Cambridge University Press, which has projected a series of monographs intended to serve as supplements to Dr. Norman R. Campbell's "Modern Electrical Theory." The series will be edited by Dr. Campbell, who, however, will not write all the volumes. The first three monographs will deal with spectra, the quantum theory, and the constitution of atoms and molecules. It is proposed that the series shall correspond roughly with the chapters of the original book, and eventually supersede the latter.

ANNOUNCEMENT is made of the amalgamation of the firms of Messrs. John Wheldon and Co., of 38 Great Queen Street, Kingsway, W.C.2, and Messrs. William Wesley and Son, of 28 Essex Street, Strand, W.C.2. Both firms are well known in the world of science as booksellers and publishers of repute. The business of John Wheldon was established in 1844, and was concerned mainly with supplying collectors and institutions with scientific works; recently it has developed in the direction of economic and applied natural science. Of particular value to the new firm will be the collection of scientific journals held by John Wheldon and Co. The business of William Wesley and Son was established in 1855, and dealt similarly with books and journals of science. A valuable side of the firm's activities, which will be continued by the new company, is the numerous agencies which are held for the sale of publications of foreign and Colonial Governments and societies. The establishments will be carried on in future in the name of Messrs. Wheldon and Wesley, Ltd., under the guidance of Mr. H. K. Swann and Mr. E. F. Wesley, who have been managers and proprietors of their respective firms for a number of years.

Our Astronomical Column.

A STUDY OF THE STARS OF TYPE N.—The stars of type N (Secchi's fourth type) are of great interest; they were formerly supposed to be near the end of their career as suns. However, their concentration in the galaxy is a proof of great distance, and shows that they are in the giant stage. Lick Observatory Bulletin No. 329 contains a photographic study of the spectra of two bright stars of the class, 152 Schjellerup and 19 Piscium, by C. D. Shand. Lines in these spectra are very numerous, which increases the difficulty of identification. The presence of carbon, hydrogen, iron, titanium, vanadium, chromium, sodium, manganese, calcium, scandium, and yttrium is certain; four other elements are suspected. It is difficult to decide whether apparent bright lines are really emission lines or mere spaces between absorption lines; the author inclines to the former view.

The most striking feature of the spectra is the "Swan" carbon spectrum; the cyanogen bands are also prominent, and possibly carbon monoxide is indicated. The suggestion is made that the oxygen present may all combine with carbon, thus explaining the absence of titanium oxide, which is prominent in the M stars.

Many of the N stars are variable, resembling in this point the Md stars. It was formerly suggested that the variability of these faint red stars is due to incipient crust formation, which caused accumulation of heat within, leading after a time to the melting of the obstruction. However, the discovery that these stars belong to the giant class renders the crust theory unlikely. Dr. Merrill recently suggested an alternative; he postulates a veil of blue smoke above the photospheres of these stars, producing almost complete absorption of the shorter waves, and also to some extent obstructing the longer heat-rays. An accumulation of heat results which may suffice to vaporise the occulting clouds of carbon, so that a temporary increase of light occurs.

Spectral changes at various stages of the cycle are discussed. The bright hydrogen lines are most intense at maximum and practically absent at minimum, at which time the carbon absorption becomes stronger. These changes are closely analogous to those in the Md stars.

THE MADRID OBSERVATORY.—The Anuario of the Madrid Observatory, 1921, in addition to the usual tabular astronomical data, contains full details of sun-spots and prominences during 1919, with diagrams of remarkable prominences, including the great May one seen during the total eclipse. There is also an article on the spectrum of Nova Cygni 1920 by P. Carrasco. Spectra, photographed at Madrid on nineteen days between August 23 and September 29, are reproduced in a manner making it easy to trace the progressive changes. There is a full table of wave-lengths of lines, with probable origin, and comparison with the spectra of α Cygni and β Orionis. The earliest spectra (August 23–24) are almost purely absorption spectra. The bright bands are traceable on August 25 and conspicuous from August 27 onwards. The volume also contains the meteorological observations made at Madrid Observatory in 1919.

POPULAR ASTRONOMY IN SWEDEN.—*Populär Astronomisk Tidskrift* is an attractive and well-illustrated periodical the publication of which was commenced last year by the Swedish Astronomical Society under the editorship of S. Arrhenius, K. Bohlin, N. V. E. Nordenmark, and H. von Zeipel. The articles in Häfte 3–4 deal with Nova Aquilæ, the moving cluster of the Hyades (for which a parallax of 0·027″ is found), and Dr. Harlow Shapley's work on the globular clusters. Mr. Nils Tamm contributes an illustrated article on the Kvistaberg Observatory; the work during 1920 included studies of Mars, Jupiter, Saturn, nebular photography, and magnitude determinations of Nova Cygni. Mr. Gyllensköld reproduces several pictures of auroral streamers, including some interesting photographs obtained at Bossekop, Lapland, in 1910. Some artificial auroræ obtained by Birkeland by cathode rays are illustrated, and the forms deduced from his theory are discussed and shown to agree very closely with the streamers of the solar corona in the eclipse of 1901.